Amendments to the Claims:

1. (canceled)

2. (currently amended) The method of Claim 10 ~~1~~, wherein the second dielectric material has a dielectric constant less than that of the first dielectric material.

3. (currently amended) The method of Claim 10 ~~1~~, wherein the second dielectric material has a dielectric constant less than about 4.0.

4. (currently amended) The method of Claim 10 ~~1~~, wherein the second dielectric material has a dielectric constant of about 1.3 to about 3.5.

5. (currently amended) The method of Claim 10 ~~1~~, wherein the first dielectric material comprises a material selected from the group consisting of SiO_2, FSG and SiCOH, and the second dielectric material comprises a material selected from the group consisting of amorphous carbon, fluorinated amorphous carbon, parylene, boron nitride, teflon, polynapthalene-N, polynapthalene-F, polyarylene ether, fluorinated polyamide, fluorocyclobutene, perfluorocyclobutene, benzocyclobutene, methylsilsesquioxane, hydrosilsesquioxane, polyarylene ethers, fluorpolymers, polyamide nanofoam, silica aerogel, fully cyclized heterocyclic polymers, SiCOH and porous SiCOH.

6. (currently amended) The method of Claim 10 ~~1~~, wherein the second dielectric material includes at least one void.

7. (currently amended) The method of Claim 10 ~~1~~, wherein the second dielectric material is a porous dielectric material.

8. (currently amended) The method of Claim 10 ~~1~~, wherein the conductive interconnect is formed of copper.

9. (currently amended) The method of Claim 10 ~~1~~, wherein the second dielectric material has a dielectric constant greater than that of the first dielectric material.

10. (currently amended) A method of forming an interconnect structure on a substrate, the method comprising the steps of:

depositing at least one dielectric layer on the substrate, the dielectric layer being formed of at least one first dielectric material;

embedding at least one conductive interconnect in the dielectric layer, the conductive interconnect having sidewalls in contact with the first dielectric material ~~The method of Claim 1~~, wherein the conductive interconnect has a top surface coplanar with the top surface of the dielectric layer; ~~and~~

removing a portion of the first dielectric material in selected areas of the dielectric layer, thereby forming at least one opening in the dielectric layer, such that the sidewalls of the conductive interconnect remain in contact with the first dielectric material, wherein

the portion of the first dielectric material is removed by a method comprising the steps of:

forming a cap on each conductive interconnect, the cap having a lateral extent greater than that of the conductive interconnect, thereby masking portions of the dielectric layer adjacent to the conductive interconnect and leaving other portions of the dielectric layer not masked; and

removing a portion of the first dielectric material in areas of the dielectric layer not masked by the cap, thereby forming the at least one opening in the dielectric layer; and

filling the opening with a second dielectric material.

11. The method of Claim 10, wherein the cap is formed of CoNiP or CoWP, and is formed by selective electroless plating.

12. The method of Claim 10, wherein the cap is formed of tungsten, and is formed by selective CVD metal deposition.

13. The method of Claim 10, wherein the cap has a lateral extent of about 10 nm to about 50 nm greater than that of the conductive interconnect.

14. (currently amended) A method of forming an interconnect structure on a substrate, the method comprising the steps of:

depositing at least one dielectric layer on the substrate, the dielectric layer being formed of at least one first dielectric material;

embedding at least one conductive interconnect in the dielectric layer, the conductive interconnect having sidewalls in contact with the first dielectric material ~~The method of Claim 1~~, wherein the conductive interconnect has a top surface and sidewalls, and the top surface is higher than the top surface of the first dielectric material, thereby exposing a top portion of the sidewalls; ~~and~~

removing a portion of the first dielectric material in selected areas of the dielectric layer, thereby forming at least one opening in the dielectric layer, such that the sidewalls of the conductive interconnect remain in contact with the first dielectric material, wherein the portion of the first dielectric material is removed by a method comprising the steps of:

forming a cap on the top surface and exposed sidewalls of each conductive interconnect, the cap having a lateral extent greater than that of the conductive interconnect, thereby masking portions of the dielectric layer adjacent to each conductive interconnect and leaving other portions of the dielectric layer not masked; and

removing a portion of the first dielectric material in areas of the dielectric layer not masked by the cap, thereby forming the at least one opening in the dielectric layer; and

filling the opening with a second dielectric material.

15. (original) The method of Claim 14, wherein the top surface of the conductive interconnect is initially coplanar with the top surface of the first dielectric material, and the top surface of the conductive interconnect is made higher than the top surface of the first dielectric material by removing a top portion of the first dielectric material,

thereby recessing the top surface of the first dielectric material below the top surface of the conductive interconnect and exposing a top portion of the sidewalls of the conductive interconnect.

16. (original) The method of Claim 14, wherein the cap is formed of CoNiP or CoWP, and is formed by selective electroless plating.

17. (original) The method of Claim 14, wherein the cap is formed of tungsten, and is formed by selective CVD metal deposition.

18. (original) The method of Claim 14, wherein the top surface of the conductive interconnect is about 10 nm to 300 nm higher than the top surface of the first dielectric material.

19. (original) The method of Claim 15, wherein the top surface of the conductive interconnect is made higher than the top surface of the first dielectric material by removing a top portion of about 10 nm to about 300 nm of the first dielectric material.

20. (original) The method of Claim 14, wherein the cap has a lateral extent of about 10 nm to about 50 nm greater than that of the conductive interconnect.

21-29. (canceled)

30. (currently amended) A method of forming an interconnect structure on a substrate, the method comprising the steps of:

depositing at least one dielectric layer on the substrate, the dielectric layer being formed of at least one first dielectric material;

embedding at least one conductive interconnect in the dielectric layer, the conductive interconnect having sidewalls in contact with the first dielectric material ~~The method of Claim 1~~, wherein the conductive interconnect is embedded in the dielectric layer by a method comprising the steps of:

forming at least one first opening in the dielectric layer;

removing a top portion of the dielectric material adjacent to the first opening, thereby rounding top corners of the first opening; and

filling the first opening with a conductive material, thereby forming at least one conductive interconnect, the conductive interconnect having a top surface coplanar with the top surface of the dielectric layer, and a top portion having a lateral extent greater than that of lower portions of the conductive interconnect, thereby masking portions of the dielectric layer adjacent to the conductive interconnect and leaving other portions of the dielectric layer not masked; ~~and~~

removing a portion of the first dielectric material in selected areas of the dielectric layer, thereby forming at least one opening in the dielectric layer, such that the sidewalls of the conductive interconnect remain in contact with the first dielectric material, wherein the portion of the first dielectric material is removed by a method comprising the step of:

removing a portion of the first dielectric material in areas of the dielectric layer not masked by the top portion of the conductive interconnect, thereby forming at least one second opening in the dielectric layer; and

filling the opening with a second dielectric material.

31. (original) The method of Claim 30, wherein the top corners of the first opening are rounded by a sputter pre-clean using Ar or Ar/H_2.

32. (original) The method of Claim 30, wherein the top corners of the first opening are rounded by exposing the structure to an isotropic etch.

33. (original) The method of Claim 30, wherein the top portion of the conductive interconnect has a lateral extent of about 10 nm to about 50 nm greater than lower portions of the conductive interconnect.

34. (original) The method of Claim 30, further comprising the step of removing the top portion of the conductive interconnect and a top portion of the second dielectric material, such that the top surface of the conductive interconnect is made coplanar with the top surface of the first portion and the top surface of the second portion.

35-52. (canceled)

53. (new) The method of Claim 14, wherein the second dielectric material has a dielectric constant less than that of the first dielectric material.

54. (new) The method of Claim 14, wherein the second dielectric material has a dielectric constant less than about 4.0.

55. (new) The method of Claim 14, wherein the second dielectric material has a dielectric constant of about 1.3 to about 3.5.

56. (new) The method of Claim 14, wherein the first dielectric material comprises a material selected from the group consisting of SiO_2, FSG and SiCOH, and the second dielectric material comprises a material selected from the group consisting of amorphous carbon, fluorinated amorphous carbon, parylene, boron nitride, teflon, polynapthalene-N, polynapthalene-F, polyarylene ether, fluorinated polyamide, fluorocyclobutene, perfluorocyclobutene, benzocyclobutene, methylsilsesquioxane, hydrosilsesquioxane, polyarylene ethers, fluorpolymers, polyamide nanofoam, silica aerogel, fully cyclized heterocyclic polymers, SiCOH and porous SiCOH.

57. (new) The method of Claim 14, wherein the second dielectric material includes at least one void.

58. (new) The method of Claim 14, wherein the second dielectric material is a porous dielectric material.

59. (new) The method of Claim 14, wherein the conductive interconnect is formed of copper.

60. (new) The method of Claim 14, wherein the second dielectric material has a dielectric constant greater than that of the first dielectric material.

61. (new) The method of Claim 30, wherein the second dielectric material has a dielectric constant less than that of the first dielectric material.

62. (new) The method of Claim 30, wherein the second dielectric material has a dielectric constant less than about 4.0.

63. (new) The method of Claim 30, wherein the second dielectric material has a dielectric constant of about 1.3 to about 3.5.

64. (new) The method of Claim 30, wherein the first dielectric material comprises a material selected from the group consisting of SiO_2, FSG and SiCOH, and the second dielectric material comprises a material selected from the group consisting of amorphous carbon, fluorinated amorphous carbon, parylene, boron nitride, teflon, polynapthalene-N, polynapthalene-F, polyarylene ether, fluorinated polyamide, fluorocyclobutene, perfluorocyclobutene, benzocyclobutene, methylsilsesquioxane, hydrosilsesquioxane, polyarylene ethers, fluorpolymers, polyamide nanofoam, silica aerogel, fully cyclized heterocyclic polymers, SiCOH and porous SiCOH.

65. (new) The method of Claim 30, wherein the second dielectric material includes at least one void.

66. (new) The method of Claim 30, wherein the second dielectric material is a porous dielectric material.

67. (new) The method of Claim 30, wherein the conductive interconnect is formed of copper.

68. (new) The method of Claim 30, wherein the second dielectric material has a dielectric constant greater than that of the first dielectric material.